



# Standardization in research and innovation projects

Success story: **energy**

## STARGRID:

The STARGRID (Standards analysis supporting smart energy grid development) project has been initiated by the European Commission in 2012 to provide a clear overview of current activities and to lay down requirements and evaluation criteria for Smart Grid standards, in order to work out recommendations on the future strategy of the Commission regarding Smart Grid standardization. Besides classical Smart Grid topics like interoperability and security, the particular focus of the project is placed on industry requirements. Stakeholders like SMEs which are normally not involved in the standardization process will benefit from the information made available on the STARGRID website during the course of the project.

[www.stargrid.eu](http://www.stargrid.eu)

## THE PROJECT

With the advent of Smart Grids the development and adoption of standards ensuring interoperability and security become of utmost importance in the field of electricity networks. This situation has led to an ever-increasing pace in standardization activities, whose key players are international standardization organizations like IEC and IEEE, but also a wide range of national and European organizations

The STARGRID project aims to analyse and critically assess the Smart Grid standardization process and procedures at European and international level and to provide an in-depth analysis and mapping of current activities. One of the main objectives of the project is to get an overview and common understanding of the documents produced by industry initiatives, by international and European Standardization Organizations (e.g. CEN, CENELEC, ETSI), and by relevant national standardization organizations (e.g. ASRO, DKE).

## STANDARDS: A SOLUTION FOR MARKET UPTAKE

Smart Grids are identified as being essential for an economic, reliable and sustainable future electricity supply. As Europe becomes a single electricity market and more strongly interconnected to accommodate large scale (fluctuating) renewables and cross border trading, it is evident that there is need for a set of uniform European standards with respect to Smart Grids. Developments, not only technological, are very fast – think e.g. of emerging electric vehicles – and must not be hindered by differences in standards and omissions (not being thought of). European industry will benefit from adequate and uniform Smart Grid standards because this will reduce manufacturing costs for tailor made (country) solutions and increase the (export) market size and consequently offer a better international competitive position.

 It is noticeable that the industry and the stakeholders' requirements raise issues to be taken into consideration by the standardization organizations which are critical for the realization of the smart grids roll out. 

## HOW WILL THE STANDARD BE DEVELOPED?

The STARGRID consortium is formed of a team of 5 partners including research centres, energy testing and consulting organisations and 1 standardization body. All partners are experts in Smart Grids and related standards committees, therefore fully aware of existing standards and industry developments. Given this background the objective of the project – analyze current Smart Grids related standards, identify gaps and provide recommendations for further development of standardization activities – are achieved.

Several gaps in existing standards have already been identified. Nevertheless there seems to be a lack of standards awareness as stakeholders consider that the main concern is not the lack of applicable and mature standards but their adoption and implementation across the broad technical scenario with many projects already underway. STARGRID interaction with industry aims to mitigate this barrier for Smart Grids effective deployment.

STARGRID will investigate the opinion of the industry about Smart Grid standards (as such) and use it as a part of the project's analysis, extending the scope beyond the EU "Smart Grid Mandate" M/490.

## BENEFITS OF LINKING WITH STANDARDIZATION

It is obvious that the introduction of future Smart Grids will be a lengthy evolutionary transformation rather than a revolutionary sudden change. There is a wide agreement among stakeholders that the development and adoption of standards ensuring both interoperability and security are essential for the future Smart Grid. Until standards are set, there is no guarantee that emerging technologies will be "plug and play" (modular solutions), that utilities and vendors will be developing cost-effective and compatible systems that would not go obsolete prematurely, and that commercial growth of technologies and associated industries are being accelerated and deployed as needed. A harmonized standardization framework will facilitate a more effective environment for research, development and technologies and services deployment for all stakeholders.

## LONG-TERM EXPECTED IMPACT

The impact of the STARGRID project will strongly depend on the consensus-building process of relevant standardization committees as well as the ability of stakeholders to put the recommendations regarding usage of standards into practice. This impact can e.g. contribute to defining new standards or discuss strategies to get new stakeholders involved in standardization, or lead to adaptations of draft documents according to additional requirements that were not considered sufficiently before intensive contact with European Standardization Organizations.

Other objectives of the project are to identify the standards' requirements that enable or limit certain use cases/business models or are decisive for the interaction of different components of Smart Grid, to investigate gaps, contradictions and overlap in available standards, to identify and recommend priority and focus points for future standardization activities.

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□□ The use of European Standards will be crucial in providing guidance for a progressive alignment of the national legal frameworks avoiding product variance and facilitating further deployment of distributed energy resources (DER) by a better use and understanding of DER capabilities. The evolution of these technical specifications into European Standards should be speeded up as trigger harmonization and facilitate further deployment of distributed generators. □□

STARGRID project recommendations .

[www.cencenelec.eu/research](http://www.cencenelec.eu/research)



Every project is different. The CEN-CENELEC Research Helpdesk can provide you with advice on how to include standardization in your project. Please feel free to contact us!

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